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World Solar Programme 1996–2005**Report of the Secretary-General****Contents**

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^{*} A/54/150.



I. Introduction

1. The General Assembly in its resolution 53/7, *inter alia*, endorsed the World Solar Programme 1996–2005 as a contribution to the overall agenda of sustainable development, and invited all Member States of the United Nations to contribute to the successful implementation of the World Solar Programme 1996–2005. Furthermore, it invited the Secretary-General of the United Nations, in consultation with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and in close cooperation with the United Nations Environment Programme (UNEP) and other relevant organizations, to (a) undertake concrete action in order to ensure that the World Solar Programme 1996–2005 is fully integrated into and brought into the mainstream of the efforts of the United Nations system to attain the objective of sustainable development; (b) bring the World Solar Programme 1996–2005 to the attention of relevant funding and technical assistance sources and, encourage them to consider contributing to its effective implementation; (c) continue to sensitize and generate a greater degree of awareness in all Member States and international, regional and national institutions, both public and private, to the strategic importance of the World Solar Programme 1996–2005 for ensuring sustainable development; (d) submit to the General Assembly, at its fifty-fourth session, a report entitled “World Solar Programme 1996–2005”, concerning measures taken by the different entities of the United Nations system in accordance with the provisions of the General Assembly resolution. The present report has been prepared pursuant to that request.

II. Background

2. Energy plays a vital role in achieving the interrelated economic, social and environmental objectives of sustainable development. This role may be characterized in very broad terms as (a) meeting the rapidly growing demand for energy services in the industrial, transport, commercial, agricultural and household sectors; (b) servicing developing countries' rural energy requirements with modern energy carriers; and (c) dealing with environmental problems at various levels. This will require significant financial, human and technical resources and a broad-based mix of energy sources. However, investments in renewable energy resources remain relatively modest, despite the fact that they are an environmentally sound means of producing energy, and are an increasingly cost-effective option for addressing the

needs of the approximately two billion people without access to modern energy services.

III. Relationship to the Programme for the Further Implementation of Agenda 21

3. The General Assembly, in the Programme for the Further Implementation of Agenda 21 (see Assembly resolution S-19/2, annex, paragraph 46 (a) and appendix), decided to address energy issues at the ninth session of the Commission on Sustainable Development, to be held in 2001; that preparations for the ninth session of the Commission should be initiated at the seventh session of the Commission; and that the preparations should utilize an open-ended intergovernmental group of experts on energy and sustainable development, to be held in conjunction with inter-sessional meetings of the eighth (2000) and ninth (2001) sessions of the Commission.¹

4. At its first session (1999), the Committee on Energy and Natural Resources for Development, which had before it a report prepared by the UNEP Collaborating Centre on Energy and Environment on renewable sources of energy, with special emphasis on wind energy (E/C.13/1998/4), stressed that further efforts should be undertaken to obtain qualitative and quantitative information on the availability of renewable sources of energy, and that further dissemination of information to consumers and policy makers about successful use of technologies to utilize renewable energy sources was needed.² The Committee drew attention to the valuable recommendations for speeding up the development and deployment of renewable energy technologies contained in the World Solar Programme, 1996–2005. In the agenda for the second session (August 2000), the Committee will have for its consideration an item on renewable energy, with special emphasis on solar energy, for which a report will be prepared by the Department of Economic and Social Affairs of the United Nations Secretariat. The report of the Committee on its second session will be an input to the deliberations of the Commission on Sustainable Development at its ninth session in 2001.

IV. International coordination and cooperation

5. Following the World Solar Summit, held at Harare in September 1996, organized under the guidance of the World Solar Commission, a 10-year programme aimed at the wider use of all sources of environmentally sound, renewable energies, as well as at improving the quality of life, notably in the rural areas of developing countries, was prepared and subsequently approved by the World Solar Commission in June 1997. The Commission, chaired by Robert G. Mugabe, President of Zimbabwe, is composed of 18 heads of State and Government serving in a personal capacity, and currently oversees and guides the implementation of the programme, with the assistance of a secretariat and a college of personal representatives designated by the Commissioners. The secretariat of the World Solar Commission is located within the UNESCO Division of Engineering and Technology in Paris.

6. In a 1997 resolution on the World Solar Programme 1996–2005, the General Conference of UNESCO expressed appreciation to the heads of State and Government serving on the World Solar Commission, especially to its Chairman, Mr. Mugabe, and called upon all UNESCO Member States to contribute to the success of the implementation of the World Solar Programme 1996–2005. The General Conference also endorsed the emphasis placed by UNESCO's Executive Board on the priority nature of the World Solar Programme 1996–2005, particularly the implementation of the global renewable energy education and training programme, for which UNESCO is the executing agency. In 1998, its Executive Board recommended that concrete action be undertaken to ensure that the World Solar Programme 1996–2005 becomes a joint endeavour of the entire United Nations system. It also recommended that the relevant aspects of the Programme be incorporated in the draft programme and budget for 2000–2001 as an interdisciplinary undertaking, and that efforts be made to mobilize funding and technical assistance sources and to encourage them to contribute to its effective implementation in cooperation with the competent organizations of the United Nations system.

7. The Director-General of UNESCO has written to the executive heads of the relevant United Nations organizations and programmes, inviting their cooperation in the implementation of the World Solar Programme 1996–2005. A circular letter, co-signed by the Director-General and the Administrator of the United Nations Development Programme (UNDP), was sent in May/June 1999 to all

UNDP resident representatives and directors/heads of UNESCO established field offices, drawing their attention to General Assembly resolution 53/7 and instructing them to assist Member States in the implementation of the projects included in the World Solar Programme 1996–2005.

8. Within the United Nations system, efforts continue to be made to promote policies and programmes in renewable energy resources and to foster cooperation in the implementation of global, regional and national projects, in accordance with General Assembly resolution 53/7.

9. The entities of the United Nations are involved in a broad range of technical cooperation activities in response to the demands and priorities of the countries which they support. Such activities are intended to promote energy efficiency and demand-side management; clean energy technologies; more widespread development and application of renewable energy technologies; improved access to modern energy services by rural populations; capacity-building and institutional development; energy sector planning and management to achieve the economic, social and environmental objectives of sustainable development; and the promotion of environmentally sound energy technologies. In the wake of the adoption of the World Solar Programme 1996–2005, many entities within the United Nations systems have adjusted their programmes and projects to encompass insofar as possible activities which are relevant to the World Solar Programme 1996–2005.

10. For its part, UNDP has intensified activities under its Initiative for Sustainable Energy (UNISE), which describes how energy issues relate to UNDP's main programme goals, especially poverty eradication. UNISE focuses on support for renewable energy and energy efficiency as well as modern clean energy technologies. Furthermore, UNISE underlines the importance of tackling issues beyond technology, such as institutional, legal and fiscal frameworks for sustainable energy and capacity-building. UNDP has recognized that many of the projects prioritized in the World Solar Programme 1996–2005 are consistent with UNISE, and that they could be considered for target for resource assignment from the core, Global Environment Facility (GEF) or third party cost-sharing, depending on the national situation and government priorities.

11. In response to a letter from the Director-General of UNESCO, the Chief Executive Officer and Chairman of the Global Environment Facility welcomed a closer cooperation in the implementation of projects included in the World Solar Programme 1996–2005, and pledged his personal support to promote GEF funding of appropriate projects, adding that GEF has a strong commitment to renewable

energy technologies as an important means for protecting the global environment and advancing the goals of sustainable development.

12. The Department of Economic and Social Affairs has taken several initiatives in regard to the development and use of renewable sources of energy. These have included training seminars, workshops and symposia on (a) entrepreneur development and innovative financing for the commercialization of renewable energy systems; (b) decentralized rural electrification; (c) decentralized energy alternatives, organized jointly with Columbia University in the United States of America; (d) municipal strengthening of institutional capacities for sustainable rural energy services, organized with the Asia Pacific Development Centre; (e) biomass energy and small hydropower; and (f) barriers to sustainable energy development in developing countries with emphasis on Africa, to be organized jointly with UNEP. Several study tours have been organized for officials from developing countries in order to familiarize them with innovative technology applications, such as land solar and wind technologies in the Netherlands and the United Kingdom. Future renewable energy study tours to India, Australia and the United States of America are planned during 2000. With funds from the Global Environment Facility, the Netherlands and Australia, the Department is implementing a large five-year project in China to remove barriers to the rapid commercialization of renewable energy and to demonstrate some key technology applications. In the Arab States, a regional project is being implemented to build institutional capacities for renewable energy development, including entrepreneur development, standards and best practices. With financing from a trust fund established by Italy, several small island States are introducing renewable energy technologies for electricity generation, including solar photovoltaic energy, wind, biomass, and ocean wave energy systems.

13. The World Solar Commission — through the college of personal representatives of Commission's members and through its secretariat — has continued to increase cooperation with international intergovernmental organizations within and outside the United Nations system, notably with the European Commission, regional development banks and the bilateral assistance agencies of a number of industrialized countries. Canada, Italy and the Netherlands have made important financial contributions to the implementation of projects of the World Solar Programme 1996–2005.

14. The secretariat of the World Solar Commission and UNEP have participated actively in a number of international meetings dealing with relevant aspects of the greater use of

renewable and environmentally friendly energies, such as an expert meeting on renewable energy (Vienna, June 1998), the fourth meeting of the Conference of the Parties to the United Nations Framework Convention on Climate Change (Buenos Aires, November 1998), the first session of the Committee on Energy and Natural Resources for Development of the Economic and Social Council (New York, April 1999) and an island solar summit (Tenerife, May 1999).

V. Implementation of the World Solar Programme 1996–2005

15. During the past two years, the World Solar Commission has been able to mobilize about US\$ 500 million of international assistance for the execution of approximately 400 national high-priority renewable energy projects included in the World Solar Programme 1996–2005. The Programme also includes projects submitted by developed countries, many of which have been implemented with funding from national sources.

16. In keeping with the commitments contained in the Harare Declaration on Solar Energy and Sustainable Development and the recommendations made in the World Solar Programme 1996–2005, a number of countries have taken legislative action favouring the development and deployment of renewable energy technologies. Several members of the World Solar Commission have been very active in this respect, and concrete results in the large-scale use of renewable sources of energy have been achieved. For example:

(a) In Spain, a ministerial order was issued on 6 February 1997 concerning the energy conservation and efficiency programme; the order has now been developed and put into effect. Subsidies can be granted to renewable energy firms, and legislation for an electricity protocol has been passed, firmly establishing the principle of differential treatment and giving priority to electricity generation by renewable energy sources. On 30 December 1998, a government decree was issued establishing the mechanisms and incentives enabling Spain to increase the share of electricity produced by renewable energy from 7 per cent to 12 per cent by the year 2010. In the past two years, Spain has completed installations of renewable energy technologies, at an investment of 114,000 million pesetas, producing 200,000 tons of petroleum equivalent per annum;

(b) The Government of Georgia has recently created a national sustainable energy development programme. A high-level governmental commission, chaired by the President of Georgia and which includes the Ministers concerned, the rectors of the main universities and other important personalities, has also been established in order to coordinate and facilitate the promotion and practical applications of renewable energy technologies. A permanent council, emanating from this Commission, acts as its executive body to oversee and control the implementation of the decisions taken by the Commission;

(c) In Austria, the implementation of the European Union electricity guideline has given a new stimulus to the use of renewable sources of energy, and the Government has decided that by 2005, an additional 3 per cent of the electricity production must be from renewables (excluding hydropower, which already produces 70 per cent of Austria's electricity). Electric utilities are required to feed into the grid electricity produced by renewables in plants smaller than five megawatts, and pay an increased tariff for this electricity;

(d) In September 1998, the Government of Tunisia created a national renewable energy agency, and adopted a series of measures in favour of the increased utilization of these energy sources, including a system of grants to buyers of renewable energy systems covering up to 60 per cent of the cost;

(e) In November 1998, the Government of the Niger created a national solar council in the office of the Prime Minister, with the mandate to promote the use of renewable energy sources in the country and to contribute to the implementation of the World Solar Programme 1996–2005.

17. Under the aegis of the World Solar Commission, the following meetings on business and investment opportunities, to enhance the implementation of the World Solar Programme 1996–2005, have been held:

(a) An African solar forum, Bamako, 25–28 March 1998;

(b) A business and investment meeting on the World Solar Programme 1996–2005, Tbilisi, 23–24 July 1998;

(c) A business and investment seminar on renewable energy in Latin America, Quito, 14–16 September 1998;

(d) A business and investment forum on renewable energy in Africa, Harare, 29–31 March 1999;

(e) An island solar summit on the theme "Sustainable energies", Tenerife, 6–8 May 1999;

(f) A business and investment meeting on renewable energy in the Russian Federation, Moscow, 31 May–6 June 1999.

18. The global renewable energy education and training programme, which is one of the five major projects of universal scope included in the World Solar Programme 1996–2005, is currently under development by UNESCO, which is the executing agency for the programme. A specialist has been detached from UNESCO headquarters to the UNESCO office at Harare in order to facilitate the preparation of the African component of the programme.

19. Another major project, entitled "International renewable energy information and communication system", has also been initiated with the establishment of a steering committee, following an agreement with the International Solar Energy Society (ISES). The project will be implemented jointly with ISES and other relevant intergovernmental and non-governmental international institutions.

20. Within the framework of the information activities of the World Solar Programme 1996–2005, a book entitled *The Timeless Energy of the Sun* was published by UNESCO in 11 language editions; a pocket-book edition will be printed in one million copies and widely distributed round the world.

21. In addition to the Internet Web site for the World Solar Programme 1996–2005 (<http://www.unesco.org/general/science/wsp>), a new one has been set up for the World Solar Commission (<http://www.worldsolar.org>).

VI. Conclusion

22. Significant progress has been made at the international level by individual Governments, entities of the United Nations and other organizations in the implementation of World Solar Programme 1996–2005, as part of the overall effort to enable renewable sources of energy to make an optimal contribution towards achieving a sustainable energy future. In preparing for the deliberations of the Commission on Sustainable Development on energy issues at its ninth session, in 2001, the Inter-Agency Task Force on Energy is endeavouring to ensure that the World Solar Programme is fully integrated and brought into the mainstream of the efforts of the United Nations system to attain the objectives of sustainable development.

Notes

¹ For further information, see E/CN.17/1999/8; and *Official Records of the Economic and Social Council, 1999, Supplement No. 9 (E/1999/29)*, chap. I, draft resolution II.

² See *Official Records of the Economic and Social Council, 1999, Supplement No. 12 (E/1999/32)*.